

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 22 AND MIDDLETON ROAD IN HARFORD COUNTY. THE MODIFICATION OF WORK INVOLVED IS NECESSITATED BY THE CONSTRUCTION OF A FOURTH LEG TO THE INTERSECTION. MD 22 IS ASSUMED TO RUN IN A EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION CURRENTLY OPERATES IN A NEMA FOUR-PHASE, FULLY-ACTUATED MODE WITH AN EXCLUSIVE-PERMISSIVE LEFT TURN PHASE FOR THE WESTBOUND DIRECTION OF MD 22. THE INTERSECTION WILL NOW OPERATE IN A NEMA SIX-PHASE, FULLY-ACTUATED MODE WITH AN EXCLUSIVE-PERMISSIVE LEFT TURN PHASE FOR BOTH DIRECTIONS OF MD 22 AND SIDE STREET SPLIT PHASING. THE INTERSECTION IS CURRENTLY PART OF THE MD 22 INTERCONNECT SYSTEM.

CONTACT PERSONS FOR DISTRICT 4 ARE AS FOLLOWS:

MS. ERIN KUHN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
(410) 321-2781 / 2785

MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
(410) 321-2761

MR. MICHAEL PASQUARIELLO
UTILITY ENGINEER
(410) 321-2841

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF, SR.
CHIEF, TRAFFIC OPERATIONS
(410) 787-7630

MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS
(410) 787-7676

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF,
TRAFFIC OPERATIONS
(410) 787-7631

MS. DARLENE EIDE
SUPPLY OFFICE
SIGNAL SHOP WAREHOUSE
(410) 787-7668

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS SECTION
(410) 787-7652

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY THE SHA AND INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

EQUIPMENT LIST "B"

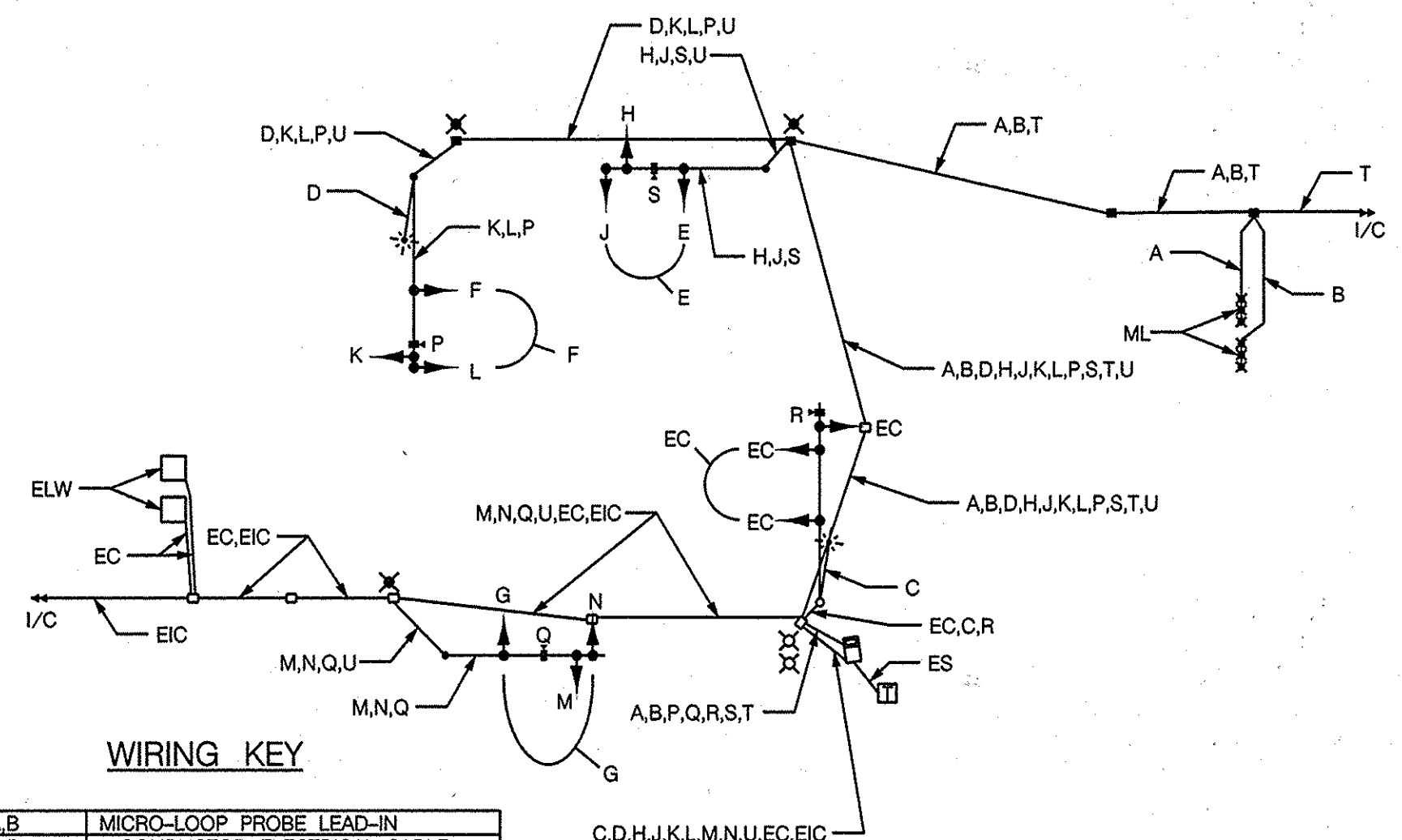
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR. ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO THE OFFICE OF TRAFFIC AND SAFETY FOR APPROVAL PRIOR TO INSTALLATION.

QUANTITY	DESCRIPTION
LS	MAINTENANCE OF TRAFFIC
1 CY	TEST PIT EXCAVATION
125 LF	24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKINGS
1 EA	VIDEO INTERFACE EQUIPMENT
30 EA	12 INCH LED SIGNAL HEAD SECTION
9 EA	8 INCH LED SIGNAL HEAD SECTION
9 CY	CONCRETE FOUNDATION FOR SIGNAL
3 EA	27 FT. MAST ARM POLE & 50 FT. MAST ARM
2 EA	15 FT. LIGHTING ARM WITH 250 WATT HPSV LUMINAIRE WITH PHOTOCCELL
4 EA	ELECTRICAL HANDHOLE
10 LF	1 IN. DETECTOR SLEEVE GALVANIZED OR FLEXIBLE, LIQUID-TIGHT CONDUIT
675 LF	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
55 LF	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT- SLOTTED
LS	REMOVE AND DISPOSAL OF EXISTING MATERIAL AND EQUIPMENT
3 EA	VIDEO DETECTION CAMERA AND 500 FT. CABLE
1 EA	VIDEO DETECTION CAMERA AND 100 FT. CABLE
45 LF	WOOD SIGN SUPPORTS 4 IN. X 4 IN.
80 LF	ELECTRICAL CABLE 5 - CONDUCTOR (NO. 14 A.W.G.)
1475 LF	ELECTRICAL CABLE 7 - CONDUCTOR (NO. 14 A.W.G.)
355 LF	ELECTRICAL CABLE 2 - CONDUCTOR (NO. 12 A.W.G.)
345 LF	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
2055 LF	DISCONNECT, PULL BACK AND REROUTE INTERCONNECT CABLE
3 EA	3/4 IN. X 10 FT. GROUND ROD
55 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
2 EA	MICRO-LOOP PROBE WITH 500 FT. LEAD IN CABLE
2 EA	D3-2 (VAR X 16") DUAL FACE SIGN - MAST ARM MOUNT
2 EA	SHIELD ASSEMBLY (36" X 75") - POLE MOUNT
2 EA	SHIELD ASSEMBLY (24" X 51") - POLE MOUNT
2 EA	R3-SL (30" X 36") SIGN - MAST ARM MOUNT
1 EA	R3-6L (30" X 36") SIGN - MAST ARM MOUNT
1 EA	R3-SR (30" X 36") SIGN - MAST ARM MOUNT
1 EA	CUT, CLEAN, GALVANIZE, AND CAP MAST ARM
2 EA	NEMA LOAD SWITCH

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1 & 5	R	R	R	R	R	R	R	R	R	R	R	R
1 & 5 CHANGE	←G-	←G-	←G-	←G-	←G-	←G-	←G-	←G-	←G-	←G-	←G-	←G-
PHASE 1 & 6	G	G	G	R	R	R	R	R	R	R	R	R
1 & 6 CHANGE	←Y-	←Y-	←Y-	←Y-	←Y-	←Y-	←Y-	←Y-	←Y-	←Y-	←Y-	←Y-
PHASE 2 & 5	R	R	R	G	G	G	R	R	R	R	R	R
2 & 5 CHANGE	R	R	R	←G-	←G-	←G-	R	R	R	R	R	R
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	R	R	R	R	R	R	R	←G-	←G-	G
3 CHANGE	R	R	R	R	R	R	R	R	R	←Y-	←Y-	Y
PHASE 4	R	R	R	R	R	R	←G-	←G-	G	R	R	R
4 CHANGE	R	R	R	R	R	R	←Y-	←Y-	Y	R	R	R
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	FLR	FLR

WIRING DIAGRAM



WIRING KEY

A,B	MICRO-LOOP PROBE LEAD-IN
C,D	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) TRAY CABLE
E,F,G	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
H,J,K,L,M,N	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
P,Q,R,S	VIDEO DETECTION CABLE
T	EXISTING 12-PAIR VOICE GRADE INTERCONNECT CABLE
U	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
EIC	EXISTING INTERCONNECT CABLE
ML	MICRO-LOOP PROBE
ELW	EXISTING LOOP WIRE (NO. 14 A.W.G.)
ES	EXISTING ELECTRIC SERVICE
EC	EXISTING CABLE
GR	GROUND ROD
PT	EXISTING POWER TRANSFORMER



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
MD 22 AND MIDDLETON ROAD
ABERDEEN, MD

TRAFFIC CONCEPTS, INC.

325 Gambrills Road
Suite E
Gambrills, MD 21054
(410) 923-7101
FAX: (410) 923-6473
EMAIL: TRAFFIC@TRAFFIC-CONCEPTS.COM

SCALE NONE DATE 8-22-08 CONTRACT NO. BW9906B2

DESIGNED BY M. ROSEN COUNTY HARFORD
DRAWN BY M. ROSEN LOGMILE 12002210.50
CHECKED BY S. RENZI T.I.M.S. NO. I-993
F.A.P. NO. NA TOD NO.

DRAWING NO. TS-3608 A GI SHEET NO. 2 OF 3